

REMARKS

Claims 1-9 are present in this application. Claim 10 has been canceled.
Claim 1 is independent.

Entry of Amendment is Proper

Entry of this Amendment is proper, at least because Applicant has simplified the issues for appeal. Furthermore, claim 1 has been amended to incorporate the subject matter of existing dependent claim 10. Accordingly, no new issues have been raised.

Drawings

Applicant wishes to thank the Examiner for indicating that the drawings filed July 6, 2004 have been approved.

Allowable Subject Matter

Applicant wishes to thank the Examiner for indicating that claim 9 contains allowable subject matter.

Claim Rejection – 35 USC 112, first paragraph

Claim 9 has been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicant respectfully traverses this rejection.

It is noted that the amendment to claim 9 that changed “less than” to “at least” was made to accurately reflect the original disclosed invention. The original language “less than” was inaccurate.

As had been stated in the previous reply, claim 9 is supported by the present specification at page 6. The specification discloses that small thickness for sheet metal 246, e.g., 2 mm, leads to mutual interference of local oscillation (page 6, lines 7-12, 16, and 17). The specification indicates that a thickness of 7mm achieves a sufficient reduction in spurious level (page 6, lines 17-19). Also, the specification states that the structure shown in Fig. 2 provides a sufficient distance d_2 so that the mutual interference of the local oscillation circuits can be suppressed. Thus, it can be seen that the specification as originally filed discloses that a thickness of at least 7 mm provides a sufficient distance so that the mutual interference of the local oscillation circuits can be suppressed.

Claim Objection

Claim 4 has been objected to for minor informalities.

With respect to phrase “a noise signal”, claim 4 has been amended to recite “the spurious signal”, consistent with the language used in claim 1.

Applicant believes that the concern over the phrase “of which” applies instead to claim 6. Accordingly, the phrase “of which” claim 6 has been amended to replace this phrase with “as having a” as requested by the Examiner.

Applicant respectfully requests that the objection be withdrawn.

Summary of the Present Claimed Subject Matter

The present invention of claim 1, in a preferred embodiment, is directed to a satellite broadcast receiving device (e.g., Figs. 1-3), comprising a chassis (e.g., chassis 32) made of metal having opposing first and second planes (e.g., upper and lower surfaces of chassis 32), a first printed circuit board attached to said first plane (e.g., board 34 attached to the upper surface of chassis 32), a first local oscillation circuit provided on said first printed circuit board (e.g., local oscillation circuit 12), a second printed circuit board attached to said second plane (e.g., board 36 attached to the lower surface of chassis 32), and a second local oscillation circuit provided on said second printed circuit board (e.g., local oscillation circuit 18), said second local oscillation circuit being shielded from said first local oscillation circuit and said metal chassis is of sufficient thickness between said first and second planes such that a spurious signal due to the two local oscillation circuits is substantially eliminated (distance d_2 ; present specification, at page 6, lines 12-14).

Claim Rejection – 35 USC 102

Claim 1 has been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,522,872 (Nishimura et al., “Nishimura”). Applicant has amended claim 1 to incorporate the subject matter of claim 10. Accordingly, the rejection no longer applies and Applicant respectfully requests that the rejection be withdrawn.

Claim Rejection – 35 USC 103; Nishimura

Claims 1, 2, and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's disclosed prior art of figs. 10-13 and Nishimura. It is noted that claim 1 has been amended to incorporate the subject matter from claim 10. Applicant respectfully traverses this rejection.

Claim 1 recites a definition of "thickness" as "between said first and second planes" and being sufficient to substantially eliminate spurious signal due to the two local oscillation circuits.

The rejection states that the admitted prior art (figs. 10-13) meet the claimed invention except for the function of eliminating spurious signals due to the local oscillation signals. Instead, the rejection relies on Nishimura for teaching a chassis which isolates the first and second oscillators such that spurious or leakage effects from each local oscillator circuit is substantially reduced.

Applicant submits that Nishimura and the disclosed prior art (figs. 10-13) fail to teach or suggest the claimed combination

“chassis made of metal having opposing first and second planes”

“first printed circuit board attached to said first plane”

“first local oscillation circuit provided on said first printed circuit board”

“second printed circuit board attached to said second plane”

“second local oscillation circuit provided on said second printed circuit board”

“said second local oscillation circuit being shielded from said first local oscillation circuit”

“said metal chassis is of sufficient thickness between said first and second planes such that a spurious signal due to the two local oscillation circuits is substantially eliminated”

In the rejection of claim 1 under 35 U.S.C. 102, it is stated that Nishimura’s up-converter section 1 and down-converter section 2 teach the claimed chassis. The 102 rejection further states that, “the leftmost metal wall or plane of chassis portion (2) opposes the rightmost metal wall or plane of chassis portion (1).”

In other words, the rejection appears to indicate that Nishimura’s separate respective chassis (1, 2) teaches the claimed chassis. The rejection appears to indicate that any two planes of any two walls of the chassis of Nishimura teach the claimed opposing first and second planes. The rejection appears to indicate that a connection between the end of a circuit board and a wall of the chassis of Nishimura teaches the claimed “attached” in, for example, the claimed first printed circuit board attached to the first plane.

Applicant disagrees.

Applicant submits that Nishimura fails to teach a chassis having “thickness between said first and second planes such that a spurious signal due to the two local oscillation circuits is substantially eliminated.” The leftmost metal wall or plane of chassis portion (2) and the opposing rightmost metal wall or plane of chassis portion (1) do not constitute a thickness of the chassis between the first and second planes. Thus, the structure disclosed in Nishimura does not read on the structure recited in the claim.

Furthermore, Applicant submits that Nishimura does not disclose thickness of the metal chassis (defined in the claims as “thickness between said first and second planes”) as being a factor in eliminating spurious signals. Instead, Nishimura teaches separate chassis to reduce mutual interference. The background section of Nishimura mentions prior art approaches to using partitions and shield covers and leads to the need to separate local oscillators by larger distances (see column 2, lines 8-13). In fact, Nishimura seeks to avoid signals that travel through the unitary chassis (column 2, lines 18-21).

These arguments apply as well to dependent claim 2.

Thus, at least for these reasons, Applicant submits that the rejection fails to establish *prima facie* obviousness. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

Claim Rejection – 35 USC 103; Saito

Although not specifically stated as such, Applicant assumes that claims 3 and 8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over applicant’s disclosed prior art of figs. 10-13 and Nishimura, in view of U.S. Patent 4,353,132 (Saitoh et al., “Saitoh”). Applicant respectfully traverses this rejection.

At least for the reasons set forth above for claim 1, Applicant submits that claims 3 and 8 are not obvious as well.

Further with respect to claim 8, Applicant submits that Nishimura and Saitoh, either alone or in combination, fail to teach or suggest the claimed, “shaft portion protrudes from the second board to an extent that a spurious signal due to the two local oscillation circuits is precluded.” [emphasis added]

As had been previously argued, the Office Action states that, “the shaft portion extends beyond the circuit board (much in the same manner as applicant’s pin) and as such would have inherently function in the same manner as applicant’s contact pin in suppressing undesired spurious signals.” Applicant believes that this statement reflects a misunderstanding of the present invention. In particular, it appears that the claim has been interpreted such that a longer shaft portion that extends beyond the circuit board is more beneficial in suppressing undesired spurious signals. **To the contrary, the present claimed invention is specifically limited to protrusion to an extent that a spurious signal is precluded, i.e., a short protrusion.** Neither Nishimura nor Saitoh address the problem of a spurious signal from simultaneous operation of two oscillator circuits.

Accordingly, Applicant submits that the rejection fails to establish *prima facie* obviousness and respectfully requests that the rejection be withdrawn.

Claim Rejection – 35 USC 103; Nakamura ‘064

Although not specifically stated as such, Applicant assumes that claims 4 and 5 have been rejected under 35 U.S.C. 103(a) as being unpatentable over applicant’s disclosed prior art of figs. 10-13 and Nishimura, in view of U.S. Patent 5,584,064 (Nakamura ‘064). Applicant respectfully traverses this rejection.

Applicant submits that Nakamura ‘064 also does not address the problem of a spurious signal and does not make up for the deficiencies of the prior art disclosed in the present application and Nishimura. Thus, Applicant submits that the rejection fails to establish *prima facie* obviousness for claims 4 and 5, as well.

Claim Rejection – 35 USC 103; Nakamura '958

Claims 6 and 7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's disclosed prior art of figs. 10-13 and Nishimura, in view of U.S. Patent 6,472,958 (Nakamura '958). Applicant respectfully traverses this rejection.

Applicant submits that Nakamura '958 also does not address the problem of a spurious signal and does not make up for the deficiencies of the prior art disclosed in the present application and Nishimura. Thus, Applicant submits that the rejection fails to establish *prima facie* obviousness for claims 6 and 7, as well.


Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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